

Notes 515 - % @ the Store

■ Sales Tax

	2 steps	1 step
Ex: Pay 6% tax on a \$150 item	Tax: 6% $.06(150) = 9$ Total: $150 + 9 = \$159$	$100\% + 6\% = 106\%$ $1.06(150) = \$159$
Ex: Pay 7.5% tax on \$2000.	Tax: 7.5 $.075(2000) = \$150$ Total: $2000 + 150 = \$2150$	107.5% $1.075(2000) = \$2150$

■ Percent Sales

	2 steps	1 step
Ex: Save 30% on a \$60 pair of shoes	$.3(60) = \$18$ <u>saved</u> $60 - 18 = \$42$	$100\% - 30\% = 70\%$ $.7(60) = \$42$
Ex: Save 15% on \$350 lawn furniture	$.15(350) = \$52.50$ $350 - 52.50 = \$297.50$	$100\% - 15\% = 85\%$ $.85(350) = \$297.50$

Working Backwards

Ex: An item cost \$16.10 after a 6% sales tax and 20% off coupon. What was the original cost of the item?

$\$ = P$
 \downarrow 20% off $\uparrow \div 0.8$
 \downarrow 6% tax $\uparrow \div 1.06$

→ Take off sales tax first $\div 1.06$

$$\frac{1.06S}{1.06} = \frac{16.10}{1.06}$$

$$S = \$15.19$$

sale price

→ Then take off the 20% sale

$$\frac{.80P}{.8} = \frac{15.19}{.8}$$

original price

$$P = \$18.99$$

Ex: I paid \$18.54 after 30% off and 6% sales tax. What's the original price?

$$\begin{array}{c} \textcircled{\$ = P} = \textcircled{\$ 24.99} \\ \swarrow \times 0.7 \quad \uparrow \div 0.7 \\ \downarrow \times 1.06 \quad \uparrow \div 1.06 \\ 18.54 \end{array}$$

17.49